

**NWS FORM E-5**

(11-88)

(PRES. by NWS Instruction 10-924)

**U.S. DEPARTMENT OF COMMERCE****NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION****NATIONAL WEATHER SERVICE****HYDROLOGIC SERVICE AREA (HSA)****WFO Jackson, Mississippi****MONTHLY REPORT OF HYDROLOGIC CONDITIONS**

REPORT FOR:

MONTH

YEAR

**February****2015**

SIGNATURE

TO: Hydrometeorological Information Center, W/OH2  
NOAA / National Weather Service  
1325 East West Highway, Room 7230  
Silver Spring, MD 20910-3283

**Alan E. Gerard, Meteorologist In-Charge**

DATE

**3/31/2015**

*When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)*



An X inside this box indicates that no river flooding occurred within this hydrologic service area.

**Synopsis...**

February 2015 was a very, very cold month. In fact, it was the coldest month of the winter season, which typically occurs in the month of January. This February, temperatures were much below normal ranging from an average temperature of 39.1° in Greenville and Greenwood to the warmest average of 47.2° in Hattiesburg. All ASOS (Automated Surface Observing System) locations were between 4.5° to 8.5° below normal for February. While the month was very cold, it wasn't necessarily very wet. Monthly rainfall totals averaged around normal to below normal. Three of the HSA's (Hydrologic Service Area) ASOS sites received 5 inches or more of rainfall, which is normal for this month. Meridian and Greenville totaled about 1.5 to 2 inches below normal for February rainfall, while Hattiesburg totaled nearly 3 inches below normal. Southeast Mississippi has been put into D1 drought.

The month started with a low pressure system building in the Southern Plains. As the 2<sup>nd</sup> rolled around, the system pushed northeast towards the Upper Midwest and pulled a cold front along with it which passed through the HSA. This front triggered widespread showers throughout the HSA and dropped ¼ to ½ inch of rainfall area wide.

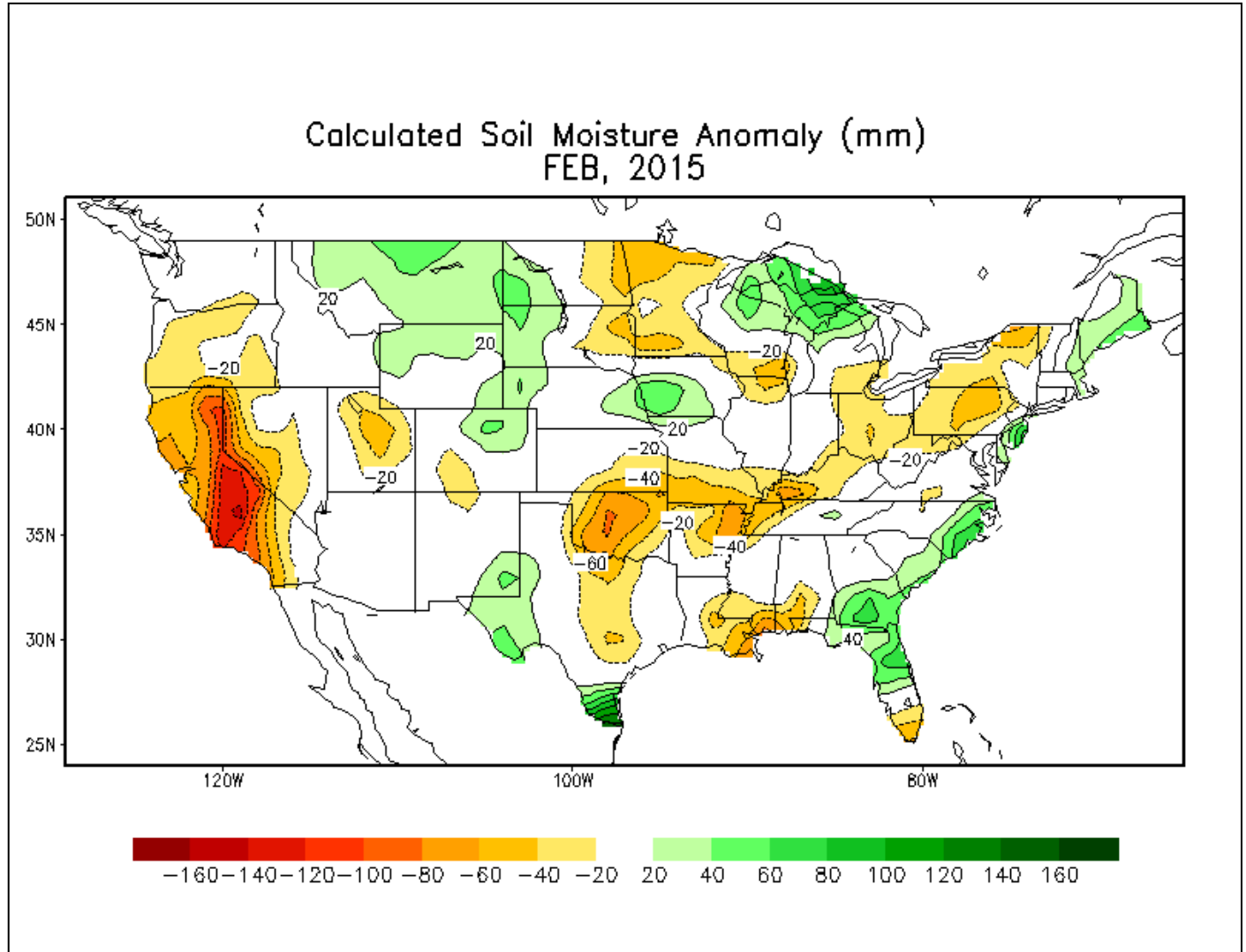
High pressure moved in behind the front and dominated the weather pattern over the HSA for a few days. Due to the very dry air held in place by the high pressure, the next front that moved through the area on the 9<sup>th</sup> did not produce any rainfall, nor did the front that passed through on the 12<sup>th</sup> and next one on the 15<sup>th</sup>. Finally, after the dry air had been broken down enough, low pressure formed over Texas on the 16<sup>th</sup>. As it quickly traveled eastward over the HSA on the 17<sup>th</sup>, it dropped between a ½ to 1 inch of widespread rainfall. The most northwestern counties in the HSA were cold enough to receive freezing rain which totaled less than ¼ inch of ice.

A few more days of quiet weather gave way to a strong, but dry, arctic front on the 19<sup>th</sup>. As a shortwave trough pushed over the Mid-Mississippi Valley on the 21<sup>st</sup> and 22<sup>nd</sup>, widespread rain fell along and north of I-20 with rainfall totals around ½ inch or more. In the Delta, a local high of more than 2 inches of rain fell. On the 22<sup>nd</sup>, an even stronger arctic front plunged through the country and all the way down to the Gulf Coast. The front first produced rain over the northern half of the area again. Then as the colder air kept surging southward, the rain gradually turned into freezing rain and then into sleet in the Delta on the 23<sup>rd</sup>. The northwest reaches of the HSA received up to 2 inches of rainfall and 1/3 inch of ice on the backside of the system. Some icing on trees and bridges occurred as far south as the Jackson Metro.

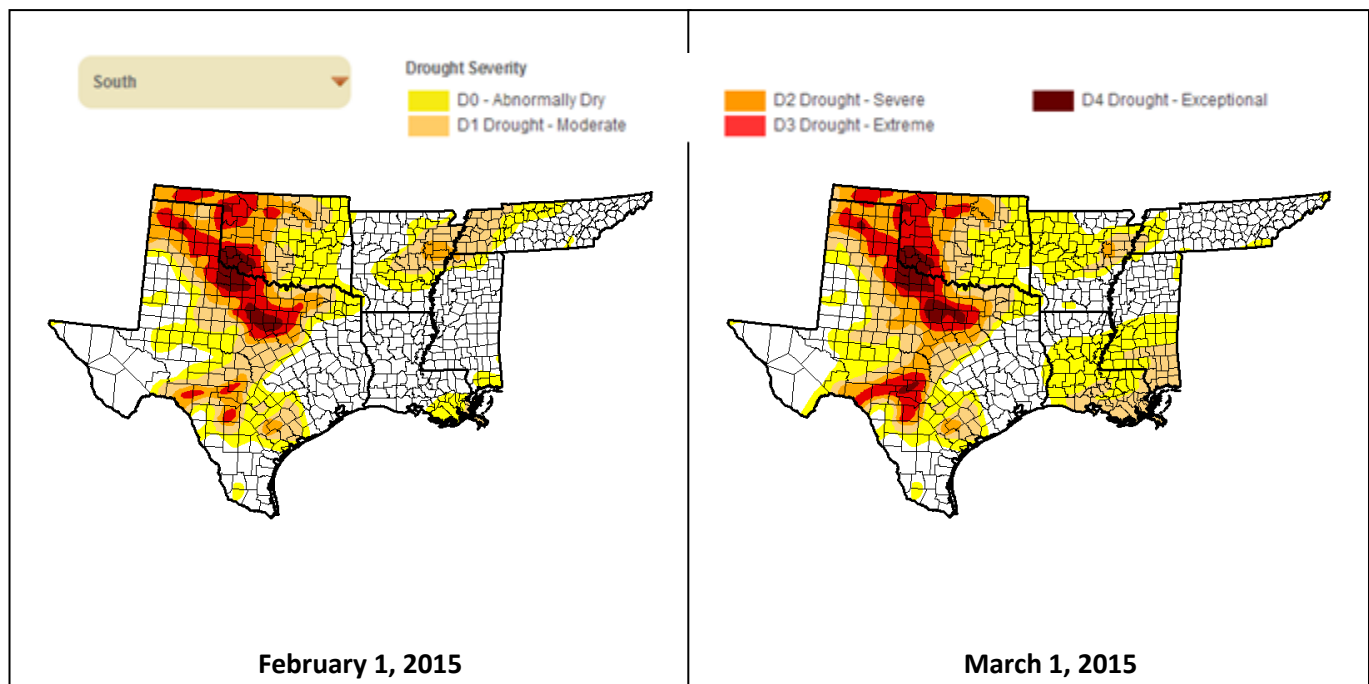
On the 26<sup>th</sup>, the last cold front of the month surged through the HSA. This system brought a good deal of snowfall to northern and Central Mississippi. Within the HSA, snowfall amounts ranged from ½ to 1 inch in a line from north of Winnsboro, LA to just south of Philadelphia to 6 to 8 inches from Grenada County to northern Lowndes County in Mississippi. The Mississippi Delta, Southeast Arkansas, and Morehouse to East Carroll Parish in Louisiana received from 4 to 6 inches. The highest point total was 8 inches near Grenada with snowfall accumulating as far south as Winnsboro to Canton to Kemper County. South of this line, mostly rain with a little bit of freezing rain occurred.

## River and Soil Conditions

### Soil Moisture Map:

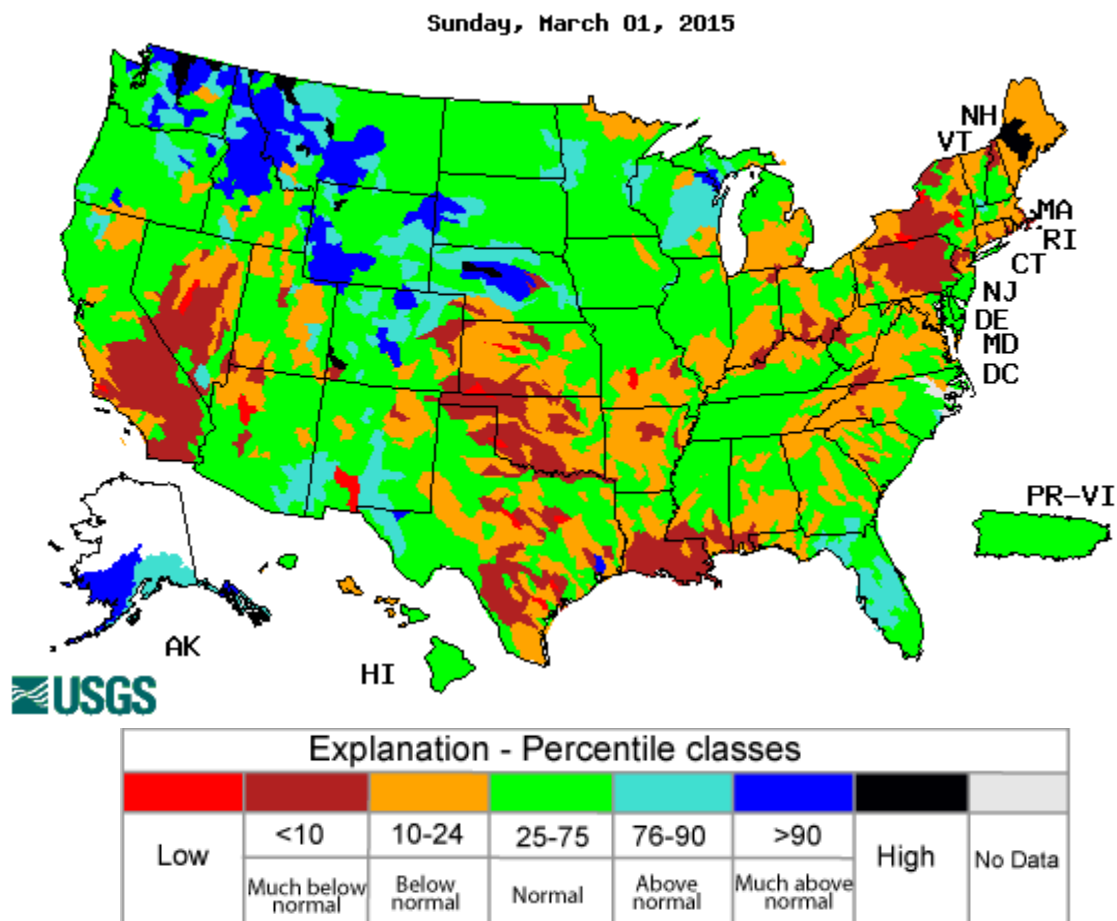


### Drought Comparison:



**Streamflow:**

The United States Geological Survey's (USGS) February 2015 river streamflow records were compared with all historical February streamflow records. The average streamflow for this February was below normal for the Pascagoula River Basin in Southeast Mississippi and the Big Black River and Homochitto Basins in Central and Southwest Mississippi. The rest of the HSA experienced normal streamflows.

**River Conditions:**

Flooding occurred in the Big Black Basin as a combined result of two heavy rainfalls on the 17<sup>th</sup> and 22<sup>nd</sup>. For the conditions of the Mississippi River from Arkansas City to Natchez, refer to the hydrographs on the next page.

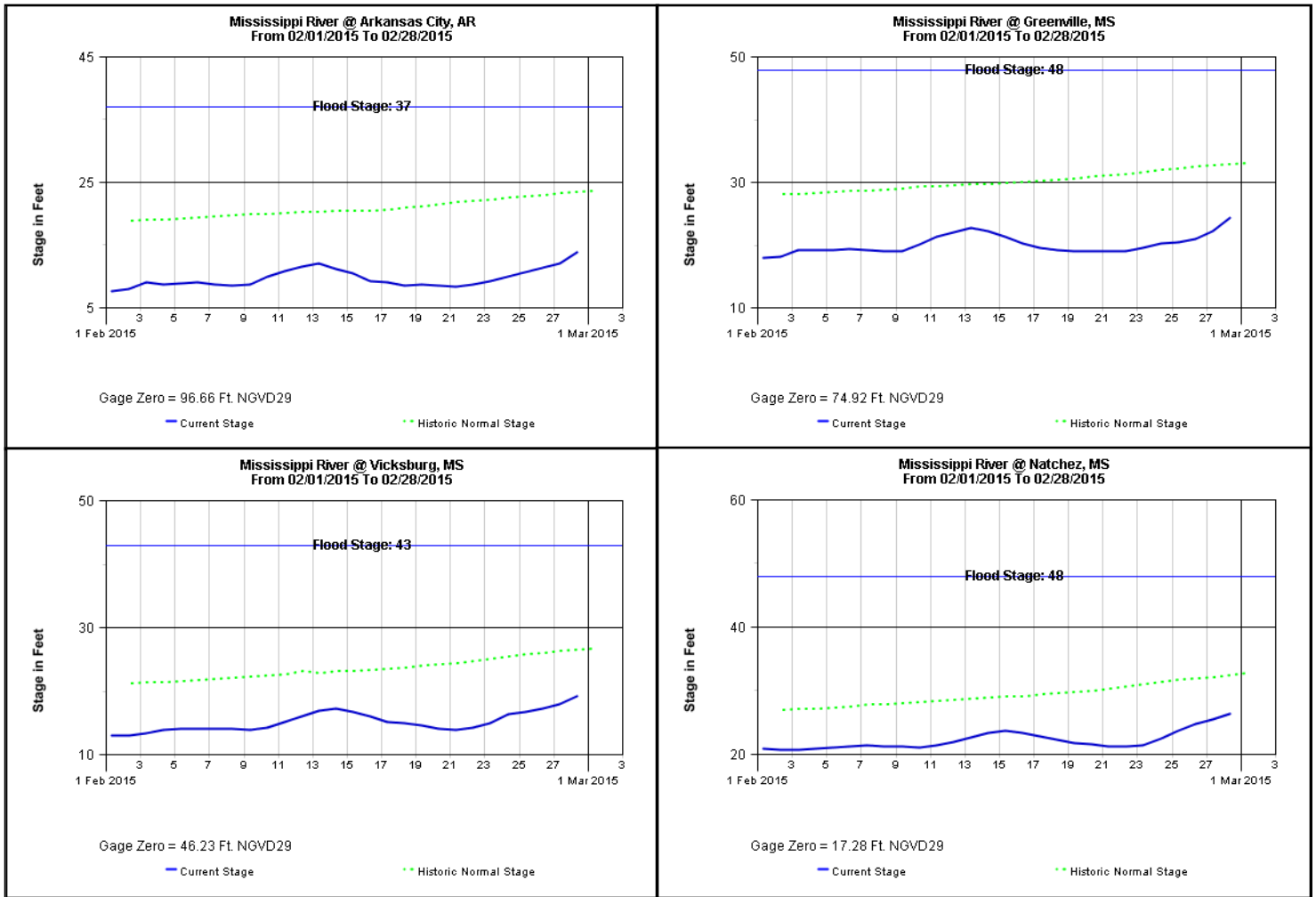
**Climatic Outlook and Flood Potential:**

The climatic outlook shows equal chances for above or below normal temperatures over the next three months for the entire HSA. In regards to precipitation, the outlook shows above normal precipitation amounts over the next three months for the entire HSA. Thus, based on current soil moisture, streamflow, and the 3-month weather outlook, the flood potentials are as follows:

Pearl River System: Above Average.  
Yazoo River System: Above Average.  
Big Black River System: Above Average.  
Homochitto River System: Average.  
Pascagoula River System: Average.  
Northeast LA and Southeast AR: Average.  
Tombigbee River System: Above Average.  
Mississippi River: Average.

# Mississippi River Plots February 2015

## Plots Courtesy of the United States Army Corps of Engineers



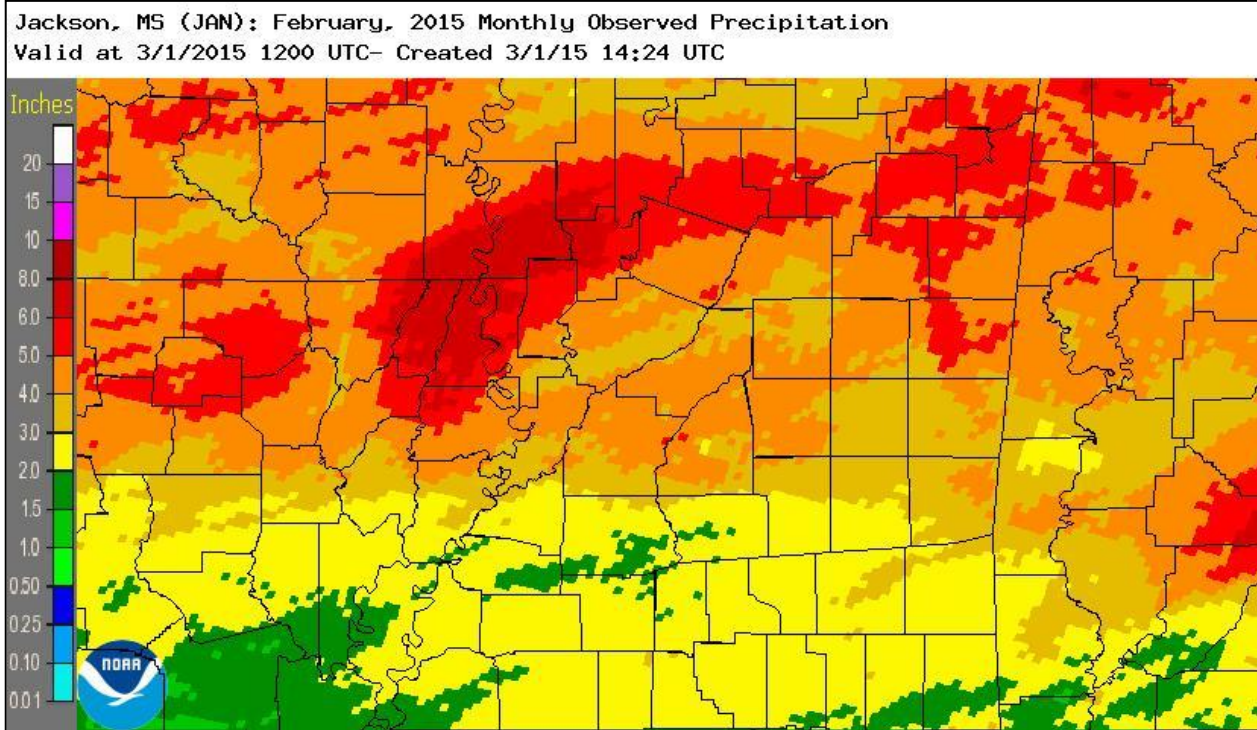
### Monthly Preliminary High and Low Stages:

Location	Flood Stage (ft)	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City	37	13.84	2/28	7.57	2/01
Greenville	48	24.39	2/28	18.06	2/01
Vicksburg	43	19.33	2/28	13.13	2/02
Natchez	48	26.34	2/28	20.68	2/03

## Rainfall for the Month of February

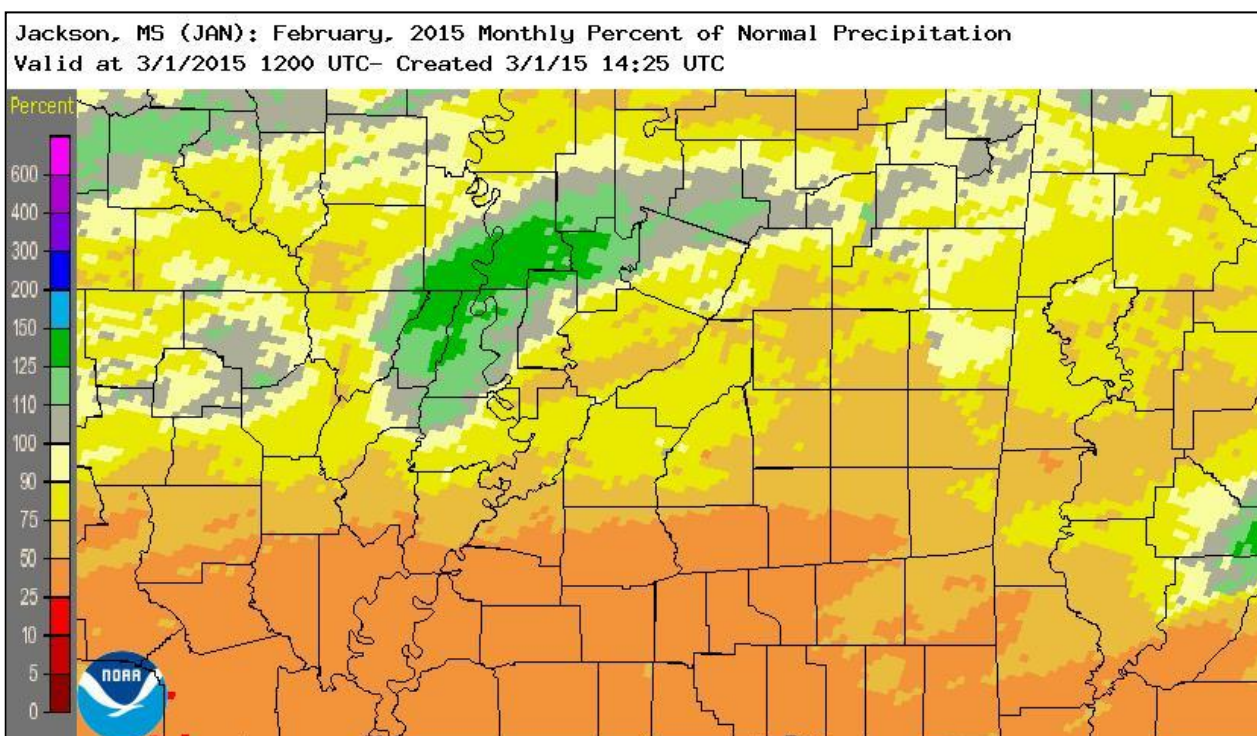
The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on January 31<sup>st</sup> until 7 am on February 28<sup>th</sup> were: 6.99 inches at Kosciusko, MS; 6.85 inches at Vicksburg, MS; 6.55 inches at Ridgeland, MS; 6.45 inches at Dermott, AR; 6.26 inches at Walnut Grove, MS; 6.11 inches at Eudora, AR; 6.03 inches at Macon, MS; 5.98 inches at Oak Grove, LA; 5.75 inches at Philadelphia, MS; 5.67 inches at Rayville, LA; and 5.65 inches at Mississippi State, MS.

**February Rainfall Estimates:** (rainfall estimates could off due to ice and snow affecting radar near months end)



Note: Observer rainfall and MPE may differ due to time differences.

**February Percent of Normal Precipitation:**



Note: Observer rainfall and MPE may differ due to time differences.

**February Rainfall for Selected Cities:**

City (Airport)	Rainfall	Departure from Normal	2015 Rainfall	2015 Departure from Normal
Jackson (KJAN)	5.48	+0.72	10.20	+0.47
Meridian (KMEI)	4.13	-1.47	10.84	+0.11
Greenville (KGLH)	3.08	-1.94	6.45	-3.54
Greenwood (KGWO)	4.95	+0.53	9.39	+0.45
Hattiesburg (KHBG)	2.48	-2.91	7.83	-3.30
Vicksburg (KTVR)	5.68	+0.41	11.25	+0.91

Total Flood Warning products issued: 4

Total Flood Statement products issued: 26

Total Flood Advisories MS River: 0

Daily Climate and Ag WX Products (AGO'S) issued: 28

Daily CoCoRaHS Rainfall Products (LCO'S) issued: 28

Daily River and Lake Summary Products (RVD'S) issued: 28

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&

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District  
USGS Ruston District  
USACE Mobile District  
USACE Vicksburg District  
USACE Mississippi Valley Division  
USGS Mississippi District  
SRH Climate, Weather and Water Division  
Lower Mississippi River Forecast Center  
Pearl River Valley Water Supply District  
Hydrologic Information Center  
Southern Region Climate Center  
Pat Harrison Waterway District  
Pearl River Basin Development District